

FPU Tips From The Field

Most Typical “Bad Things That Happen”

1. “Wait Times”

Any time you make a “change” you need to wait until the FPU runs through one of it's ¼ hour “punch times”. Don't panic when it won't let you see data or download to a key after a change has been made. You have to wait when:

- Changing time or date on the GMA
- Saving calibration numbers to GMA (after saving to EPROMS) because unit was out of tolerance
- After shut down of power to GMA
- Basically...any change to the GMA configuration will make you wait 15 minutes.

You don't have to wait when:

- Downloading a key
- Simply adding the 5, 10, 15 inch weights to check the unit.

2. “The Crash”

The most common bad thing that happens is having a crash while saving to EPROMS/GMA Unit after a recalibration or uploading a config file. It seems that when you go to save to EPROMS, Watchdog will crash the process about 1 out of every 5 or 6 times. This is because when you hit “e” to save, it opens the protected gates wide and if Watchdog detects the slightest deviation (the unit performs an internal task that interrupts the process), it crashes the system and you have lost your entire config file and must reload it. You have also lost all “old” buffered data, which is why it is critical to at least download a key (for the last 50-some days' data) before you do anything. You know have to reload the config file and hope that nothing again crashes. You may have to re-input (and save to EPROMS) the station data (state and station numbers) and calibration coefficients. Check to make sure they are correct after you reload the config file.

It seems like there is NOTHING YOU CAN DO to prevent crashes. Just make sure the laptop has no other processes (key reader, other programs) running when you go to save.

Remember to wait for the ¼ hour punch time (and maybe even the one after that) before you can see data to be sure it worked. Even going to test mode and asking for one-second inputs (S1,1) will only give you some odd reading like “1.000000” or such...WAIT!

Sometimes, we have experienced multiple crashes on the same visit. Every time, this adds 15 minutes onto the job...so it can be frustrating. But hey...at least you're not rebuilding punch blocks!

3. Not really a problem, but something that throws you for a loop.

Let's say you have replaced the GMA and uploaded a config file (or you had a crash and had to upload a config file again). You therefore are starting with totally empty buffers.

You successfully save to EPROMS and wait after the **first** ¼ point. You download a key (which takes

less than 1 second with nothing in the buffers).

When you try to read the key, it comes up with a label (filename):

20002094 20100207 034458~ .csv (or some garbage symbol like that)

Instead of:

20002094 20100207 034458 20100207 035968.csv

and you immediately infer that something is seriously wrong.

You can see that the 20002094 are the state number and station ID number. The next two groups are the start date and start time of the downloaded data.

You are seeing a truncated filename (in the upper example, above) because you have only waited until the first cardinal point, and the unit has only stored ONE set of data. If you wait until the second (or later) cardinal point, the file will then have a "start" stored data line and a second "end" data line, and your downloaded key will then look normal:

20002094 20100207 034458 20100207 035958.csv

Understanding the "wait" times are everything with the FPU!

Check out the DAD page for some of these and other possible issues and solutions for the FPU